ITEM No. 22
FILE No. XX—10

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CHEMICAL INSTITUTE OF PHILIPPS UNIVERSITY
UNIVERSITY OF MARBURG

~~CONFIDENTIAL~~

COMBINED INTELLIGENCE OBJECTIVES
SUB-COMMITTEE

~~CONFIDENTIAL~~

REPORT ON VISIT TO MARBURG UNIVERSITY, MARBURG. PHILIPPS UNIVERSITY - CHEMICAL INSTITUTE

8 April, 1945

Reported by

P. J. LEAPER
CWS, Hq. ETOUSA

23 April, 1945

CIOS Black List Item - 22
Miscellaneous Chemicals

COMBINED INTELLIGENCE OBJECTIVES
SUB-COMMITTEE
G-2 DIVISION, SHAEF (Rear), APO 413

~~CONFIDENTIAL~~

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PERSONNEL OF INSPECTION TEAM

Lt.Col.Joseph E. Smadel.....Medical Corps,Hq.ETOUSA
Major Francis T. Chinard....Medical Corps,Hq.ETOUSA
Major H.M. Horack.....Medical Corps,Hq.ETOUSA
Mr. Ernest V. Volwiler.....CWS, Hq.ETOUSA
Mr. Percy J. Leaper.....CWS, Hq.ETOUSA
Mr. Lester M. White.....CWS, Hq.ETOUSA

REPORT ON VISIT TO MARBURG UNIVERSITY

TARGET OF OPPORTUNITY

I. INTRODUCTION.

Since another target was to be visited in the Marburg area the opportunity was presented to visit the Chemical Institute of Philipps University, a part of the University of Marburg.

It was found that the institute, located on Bamhof Strasse close to the railroad station had been severely damaged by bombing. Some parts in one wing were less damaged than the rest, but the only place fit for continuation of experimental work under very limited conditions, was in a sub-basement.

Three members of the chemical faculty were interviewed. All were reasonably co-operative, particularly Dr. Jost. Little of any value was discovered in the laboratory buildings, although eight folders, Exhibits A - H inclusive, were picked up which indicated certain activities of the Institute (See Appendix). Two of these give the names of men reading for higher degrees for the past few years. This, it was hoped, might be useful in tracing chemists working for the Wehrmacht at other locations.

One folder contained correspondence between the institute and government officials. Some of the letters are marked "Geheime Reichssaches" and relate to work on polymerization of alkylene oxides conducted for the government. Other data relate to the methods of deferment of students and university personnel doing work for government agencies.

II. INTERVIEW WITH DR. GERHARD HESSE.

From Dr. Hesse the following line-up of principal faculty members was obtained:-

a. Senior Professor - Dr. Hans Meerwein. Residing at 6 Friedrich Str., Marburg.

b. Prof. Carl Mahr, Inorganic and analytical chemistry. Residing in Mahrbach.

c. Dr. Dimroth, Organic chemistry. Residing in Göttingen.

d. Dr. Gerhard Hesse, Organic and biochemistry. Residing in Marburg.

e. Dr. Wilhelm Jost, Physical chemistry. Residing at 11 Orleans Str., Marburg.

Little useful information other than the addresses of the above men was obtained from Dr. Hesse, although he had been interrogated previously by Dr. Fieser of ALSOS.

He produced several of his publications and pointed out his contribution to a recently published book on catalysis in organic chemistry. He had been actively engaged in work involving adsorption, and he was conducting researches on the purification of water supplies for the city of Marburg. This work had been approved by the government as important in the war effort.

From Hesse it was learned that the library and printed records of the institute had been moved to Bortshausen, 8 km from Marburg. Special apparatus had been moved to Schweinsberg, 18 km from Marburg, and special research equipment had been sent to Biedenkopf, 20 km from Marburg. Around the institute lay wooden cases containing ordinary laboratory equipment, which undoubtedly was to be moved to a safer place.

It was further learned that in Marburg an institute called Marbacher Ateg Metallchemisches Institut existed. This was under the direction of a Dr. Schanck, and had done work for the Wehrmacht under secret orders. This institute was not visited, as it was later learned from Dr. Meerwein that the work was not of high priority and related chiefly to metallurgy.

III. INTERVIEW WITH DR. WILHELM JOST.

Jost was found to be an ardent anti-Nazi with strong Socialistic ideas. Since he had difficulty with the Gestapo in connection with an appointment he had held at Strasburg (Ecole de Petroleum) under the Air Ministry, he was willing to reveal all he knew of matters pertaining to the war. His own work had been on the kinetics of gas reactions as related to the "knocking" of gasolines and hydrocarbon mixtures, chiefly for aviation fuels. He did not like his appointment at Strasburg and had attempted to resign. Since this was not possible he claimed that he sabotaged the work by wasting

time on useless projects. For this he was apprehended by the Gestapo, but through the agencies of an Air Ministry official he had been acquitted and relieved of his post. Further research for the Air Ministry had been done from a more academic viewpoint at the University of Marburg.

Following Jost, an Austrian, Dr. Machu had been appointed at Strasburg and the department C.P.V.A. (Chemische Physikalische Versuchs Anstalt) for the Navy was formed. This institute did work on a new type submarine and on rocket propelled fighters. Jost said he knew a Dr. Pietzsch in the C.P.V.A. who had supplied him with details of various activities of the organization.

Jost was then questioned concerning his knowledge of hydrogen peroxide. He stated that concentrated peroxide of 80 - 85% strength was being used for torpedoes. This was made by concentrating the regular 30% product under vacuum at low temperatures. He further added that the most important plant for concentrating was at Lauderburg in the Harz mountains, and was operated under the name of Schickert and Co. He stated that this plant was a hydroelectric plant, but he could supply no details. The concentrated H_2O_2 is referred to as T-Stoff. Other units making hydrogen peroxide existed at I.G. Ludwigshafen and also in Munich.

He said he had learned from Pietzsch that a new factory had been started in Upper Silesia to produce 1000 tons per year of the concentrated material. This plant was to be in full production by January, 1945, but because of the scarcity of steel would not be ready until midsummer and then only to produce 300 tons per year.

He stated that distillation was done in glass equipment without any added stabilizer, but he believed the 30% material was delivered stabilized with 2-hydroxy quinoline or somesuch phenolic stabilizer.

Jost and an assistant named Hauffe (residence, 28 Langemarck Str., Marburg) had conducted some laboratory experiments at Marburg University on the concentration of hydrogen peroxide but only on a very small scale to procure material for experimental work. Jost was then questioned concerning his work under the Air Ministry, and stated that he had worked on the slow combustion of fuels under Dr. von Philippovich, Departments LC1 and LC5. He supplied the following names of important officials in Air Ministry research:

Dr. Lorenz and his assistant, Dr. Baemker, both at Munich.
Dr. Seewald at Darmstadt.
Dr. Osenberg at Hanover, responsible for planning, who did

much of his work at Northeim near Göttingen.

He further stated that the Air Ministry was supposed to have developed a rocket driven by gunpowder, which was launched from fighter aircraft and followed a spiral trajectory. These rockets were filled with smaller units which in turn followed a spiral path after liberation. The idea was to create a wide field of destruction to bring down enemy bombers. These rockets were supposed to be ready by February or March of 1945, but he said he could not vouch for the accuracy of this information as it had been obtained second-hand.

IV. INTERVIEW WITH PROFESSOR HANS MEERWEIN.

Professor Meerwein is a well known organic chemist and his name has become associated with reduction by metallic alcoholates and with complex organic polymerizations.

He stated, upon interrogation, that he had worked closely with I.G. Farben at Leverkusen and elsewhere, and had assigned patents to them on a royalty basis. He was reluctant to talk of his recent work, but it probably related to high molar polymers of the alkylene oxides which had found use as additives for special lubricating oils. He stated that new catalysts for this reaction were thionyl chloride and ferric chloride. A polymer had been developed from tetrahydro furane and ethylene oxide, using the above catalysts, which had been used for lubricating oils. Attempts to bring about a more complex union of these chemicals led to a rubber-like material of very poor physical characteristics.

The Perlons or polyurethane polymers of I.G., in which an alkylene di-isocyanate is condensed with an alkylene glycol resulted from researches done by Meerwein. He had worked closely with Schering of Berlin for 25 years, and had assigned patents to this company also.

Questioned as to his activity in fine chemicals and pharmaceuticals he referred only to the rectal anaesthetic Avertin (tribromethanol), the process for which he had worked out for I.G. Farben, Elberfeld some 20 years ago. The production of this drug was thought to be 2 to 3 thousand kilograms per year.

He stated he has found new and useful catalysts to convert pinene to camphene en route to synthetic camphor. These are thoric or tungstic acids and are used at 180°C.

Meerwein expressed a hope that the Institute would soon be able to operate again by using the material that had been removed to safety.

P. J. LEAPER.

V.

APPENDIX A.

The following documents were obtained and have been turn over to MIRS for filing:

Exhibit A - Diplomprüfung für Chemiker.

" B - Liste der Diplom-Chemiker-Hauptprüfung.

" C - Iodoxyhydroquinone trimethylether. Bromo-xyhydrochinon trimethylether. Bromoacetessigester.

" D - Reduktion mit verschiedenen Metallalkoholaten.

" E - Diplom-Chemiker Verprüfung Protokolle d. Prüfung.

" F - Register der Diplom-Verprüfung, 1939 - Jan.1945.

" G - Diplom-Chemiker-Hauptprüfung Protokolle etc.

" H - Reichsforschungsrates.